

### **REMARKS**

Claims 1-35 are presently pending. Claims 12, 15-17, 20 and 26 have been amended. The specification has been amended to correct minor typographical errors. Claims 28-35 have been added.

Applicant respectfully requests reconsideration of the application in view of the foregoing amendments and the remarks appearing below.

#### **Declaration**

The Examiner has indicated that the declaration received by the U.S. Patent and Trademark Office on May 14, 2001 is defective because it lists two inventors, whereas the application was originally filed in the name of only one inventor.

Applicant submits herewith a newly executed Declaration, which is consistent with the other inventor information filed with the original application.

#### **Amendments to the Drawings**

Applicant has discovered two minor errors in the drawings, one in FIG. 1 and one in FIG. 2. Attached are two annotated drawing sheets showing the proposed changes to FIGS. 1 and 2. Once the Examiner approves these changes, Applicant will submit new formal drawings to the U.S. Patent and Trademark office.

#### **Rejections under 35. U.S.C. § 112, Second Paragraph**

The Examiner has rejected claims 1-27 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention.

Regarding claims 1-5, 12, 17 and 18, the Examiner asserts that the terms "mess statement," "data statement" and "problem statement" used therein are indefinite because Applicant is acting as his own lexicographer but has failed to clearly define the uncommon meanings of these terms. Applicant respectfully disagrees.

These, and other, terms used throughout the present application are not uncommon terms in the relevant field of creative problem solving. Rather, these terms have come to be used in standard ways in this field. For example, the term "mess" is used in a manner similar to its use in the present application in U.S. Patent No. 5,662,478 cited by Applicant in the Information

Disclosure Statement of June 27, 2001. In addition, attached as Exhibit A is a page of a document from the Website of the Creative Problem Solving Group, Inc. that uses the term "mess" in a manner consistent with the present application in connection with its "CPS" problem solving framework. The document from which this page has been excerpted may be found at [http://cpsb.com/resources/downloads/public/Versions\\_of\\_CPS.pdf](http://cpsb.com/resources/downloads/public/Versions_of_CPS.pdf). The field of creative problem solving has been in existence since at least the 1950s, as evidenced by Exhibit B, which documents the history of the CPS framework.

Even if the term Applicant uses were not well-known in the field of creative problem solving, which they are, Applicant has provided ample explanation of these terms so as to fully enable someone skilled in the art to make and use the present invention. For example, regarding the term "mess statement," Applicant states on page 12, lines 11-12, "The criteria are usually expressed using a positive, idealistic stem in the form of a mess statement," and then goes on to give "Wouldn't it be nice if . . ." as an example of such a positive, idealist stem. This disclosure clearly indicates that a "mess statement" is a statement formed from a positive, idealist stem. The meaning is further supported by the mess statement at page 12, lines 25-26, "Wouldn't it be nice if we had a wheelbarrow that was suitable for application to high-rise construction?" In addition, on page 16, lines 18-19 guidance is further provided in the statement, "In other words, the user(s) now have a goal (as represented by the mess statement . . . ." Upon reading these extracted statements and, certainly, the entire present application, Applicant asserts that those skilled in the art would readily understand the meaning of "mess statement" so as to extrapolate mess statements to other invention contexts. For example, it would be well within the ordinary skill of an artisan to conceive of the mess statement, "Wouldn't it be helpful to have an indicator that indicates that someone behind a closed door is on a cell phone prior to knocking on the door or entering?" This mess statement could then lead to a new invention(s) by implementing the present invention.

As for the term "data statement," aside from this term being known in the art, the present application states at page 15, lines 5-19 that data statements are statements 1) relating to a mess statement and/or a target market, target technology area and the like and 2) consisting of technical or business information. The goal of generating data statements is to catalog business and/or technological aspects of the technology and/or market at issue. Further support for the meaning of the term "data statement" is found at page 16, lines 19-21 in the excerpt, "a picture of

the state of the art (as represented by the data statements) . . . .” Again, Applicant asserts that upon reading of these excerpts and the entire present application, those skilled in the art would not find that the term “data statement” is indefinite. While the variety of information within this constrained meaning of “data statement” may be large, this does not make the term indefinite.

Similarly, concerning the term “problem statement,” aside from this term also being known in the art, the present application states at page 16, lines 20-21 that “problem statements” indicate “problems in the state of the art which appear [to] participant(s) to prevent or hinder the attainment of a goal.” Again, Applicant asserts that upon reading of this excerpt and the entire present application, those skilled in the art would not find that the term “problem statement” is indefinite.

Regarding claims 1 and 17, the Examiner states that it is unclear what the term “elements” means, what “limitations of problem-element-solution combinations” are and what “solutions to limitations” are. Applicant respectfully disagrees.

As with the terms “mess statement,” “data statement” and “problem statement” discussed above, the terms “element,” “solutions” and “limitation” are terms known in the art. Even if this were not the case, the meanings of these terms would be very clear to those skilled in the art in the context of the present invention based on their use in the present application. Regarding the term “element,” elements and their function are described in detail in Sections 7.1.6 and 7.1.7 of the present application starting on page 17. Generally, however, elements are items applied to problem statements that stimulate creativity within participants to generate solutions to the problems contained in the problem statements. A “solution” in the context of the present invention, as in its ordinary meaning, is generally an answer to the problem contained in the corresponding problem statement. See, generally, Section 7.1.7. A “limitation” in the context of the present invention, as in its ordinary meaning, is “a reason why the invention might not work or complete constraint on its operation.” Page 20, lines 25-26. Applicant asserts there is nothing indefinite about these terms in the context of the present invention, especially upon reviewing the entire disclosure.

Regarding claims 5-11 and 19-21, the Examiner states that it is unclear:

- 1) what a stimulus is;
- 2) how elements are randomly generated;
- 3) how elements are conceived using visual, tactile or olfactory stimulus;

- 4) how a solution is conceived using an element and a problem statement; and
- 5) how a solution is stored in a manner that indicates its relationship to a problem statement and an element.

Applicant respectfully disagrees and asserts that these items are either clear based on the disclosure of the present application or are of no consequence to the patentability of the present claims. Concerning item 1), it is clear from the present application that a stimulus in the context of the present invention is something that triggers a human cognitive process. In the context of generating elements, a stimulus may be, e.g., visual, tactile or olfactory matter, that stimulates a participant to think of elements relating to that matter. In the context of generating a solution to a problem of a problem statement, stimulus may be a certain element that causes a participant to think of a solution that contains the element. See, e.g., the example of the element "tuning" in connection with the heating of a fluid at page 19, lines 8-9.

Concerning item 2), above, the details of how elements are randomly generated is inconsequential to the patentability of the present claims. Those skilled in the art would readily be able to make and use the invention without any details of how the random generation is accomplished. One example is to randomly pick an element from among a preassembled list of elements. The selection of a suitable random generation process is generally a simple matter.

Concerning item 3), above, elements are conceived using visual, tactile or olfactory stimulus via human cognitive processes. See, e.g., the example at page 17, line 32 to page 18, line 3 regarding a fern being used as stimulus for generating elements. Certainly, the Examiner is not suggesting that the claims are enabled only if Applicant describes in detail the processes of human cognition.

Concerning item 4), above, the conception of a solution from a problem and an element, too, is a human cognitive process that Applicant need not explain to enable someone skilled in the art to make and use the claimed invention.

Concerning item 5), above, similar to item 2), the details of how a solution is stored in a manner that indicates its relationship to a problem statement and an element is inconsequential to the patentability of the present claims. Those skilled in the art would readily know various ways to represent the relationship among a solution, problem statement and element, including the use of tags and other relational means. Again, the selection of a suitable random generation process is generally a simple matter.

Regarding claim 12, the Examiner states that it is unclear what is meant by a "complete invention," a "seed of an invention" and "all solutions to the limitations." Applicant respectfully disagrees. Concerning the term "complete invention," Applicant has amended claim 12 to include the identifier "IOD" in order to distinguish a complete IOD invention from a complete invention generally. That is, a "complete IOD invention" is a special case of a complete invention. A complete IOD invention is defined by a seed of an invention (i.e., a solution to a problem contained in a problem statement), and all of the corresponding solutions to all of the limitations of that seed of an invention. This is discussed in the present application at page 21, lines 3-7. Concerning the term "seed of an invention," this term is known in the art of creative problem solving is generally interchangeable with the term "solution" discussed above. The interchangeability of "seed of an invention" and "solution" is addressed at page 18, lines 29-31. Concerning the phrase "all solutions to the limitations," Applicant has amended claim 12 to more clearly state that for a complete IOD invention each limitation must have at least one solution and all such solutions are part of the complete IOD invention.

For at least the foregoing reasons, Applicant asserts that the rejected claims are not indefinite. Accordingly, Applicant respectfully requests that the Examiner withdraw the present rejections under 35 U.S.C. § 112, second paragraph.

#### **Rejection under 35 U.S.C. § 103**

The Examiner has rejected claims 1-27 under 35 U.S.C. § 103 as being obvious in view of U.S. Patent No. 6,101,490 to Hatton. In particular, the Examiner states that Hatton discloses all of the limitations of these claims except data being a mess statement, a data statement relating to the mess statement, problem statements relating to the data statements, elements relating to the problem statements, mess statements and/or data statements, solutions to the problem statements, limitations of problem-element-solution combinations, solutions to the limitations and elements conceived using visual, tactile or olfactory stimulus, or how the solutions are conceived. The Examiner asserts that these differences are only found in the nonfunctional descriptive material. The Examiner then asserts that it would have been obvious to a person having ordinary skill in the art at the time of the invention to use data having any type of content because such data does not functionally relate to the steps or structure of the claims and because the subjective interpretation of the data does not patentably distinguish the claimed invention. Applicant respectfully disagrees.

Hatton discloses a computer program for creating new ideas and solving problems by analogy. Generally, the Hatton computer program solves a problem by parsing an English language description of a problem of one type, e.g., human, animal or plant, and using a first noun of the description to look up a second noun of an analogous situation of another type and look up a description of solving an analogous problem relating to the second noun. The first noun is then substituted for the second noun in the description relating to the second noun to arrive at a solution for the original problem.

Turning to independent claim 1 of the present application, this claim, as amended, requires, among other things, a computer processor programmed to request and accept input comprising data selected from a group of specific data types, i.e., mess statements, data statements relating to the mess statements and problem statements relating to the data statements, etc. Again, the Examiner asserts that the data corresponding to these data types is merely nonfunctional descriptive material that does not patentably define the invention over Hatton. Applicant respectfully disagrees.

As mentioned above, claim 1 requires that the computer processor be programmed to request the specific data types recited in claim 1. In order to make such a request, the processor of claim 1 has to be specifically programmed to make any one of these requests. In contrast, Hatton's processor is not programmed to request any of these data types. Consequently, there are distinct functional and physical differences between the processor of claim 1 and Hatton's processor. Therefore, the data types are not merely nonfunctional descriptive material.

Applicant notes that it may be fairly asserted that Hatton's descriptions of problems are "problem statements." This may lead one to assert that these "problem statements" are equivalent to the "problem statements" limitation of claim 1. However, this is not so. The "problem statements" of claim 1 are specifically "problem statements relating to the data statements," which in turn relate to mess statements. Regardless of how Hatton's processor may be programmed to request descriptions of problems, it is certainly not programmed to request problem statements that relate to data statements that relate to mess statements, as these data types are defined in the context of the present invention. (See the above discussion of the terms at issue in connection with the 35 U.S.C. § 112 rejections for a discussion of the meanings of the various terms used in the present claims.)

Regarding solutions to problem statements, the Hatton system can be fairly asserted to provide solutions to problem statements. However, it does not request that solutions be input into the system. In contrast, Hatton's solutions to problem statements are output of the system.

Applicant's position is that the only way to assert that Hatton's computer processor is programmed to request any one of the data types recited in claim 1 is to make the assertion in hindsight of the present claims. Of course, use of hindsight in formulating obviousness-type rejections is improper.

Similar arguments apply to dependent claims 2-11, which require specific ones of the data types. Regarding dependent claim 12, as amended, this claim requires that the computer processor be further programmed to instruct the user on what constitutes a complete IOD invention. Similar to above, this is not merely nonfunctional descriptive material, but rather involves the functionality and structure of the processor. Hatton certainly does not disclose or suggest this limitation. Nor would this limitation be obvious in view of any combination of references of record and/or ordinary skill in the art.

Regarding independent claim 17, this claim, as amended, requires, among other things, the step of inputting data into a computer processor, wherein the data must fall within the specific types recited in claim 17, namely, the types discussed above relative to the obviousness-type rejection of claim 1 and the 35 U.S.C. § 112 rejections. As asserted above, Hatton does not disclose the step of inputting data of any one of these data types, nor would it be obvious to modify the Hatton method to include the inputting of data of these types.

Again, the Examiner asserts that the type of data input into the computer processor is essentially immaterial to patentability since it is merely nonfunctional descriptive material. Again, Applicant respectfully disagrees. The specific data types recited in claim 17 are indeed functional relative to the invention being claimed. That is, these data types are necessary to performing the method of facilitating conception of inventions and are, therefore, functional. As discussed in MPEP § 2106, the claimed invention is to be "considered as a whole to determine whether the necessary functional interrelationship is provided."

Similar to Applicant's position relative to claim 1, Applicant asserts that the only way it can be asserted that Hatton's method involves the inputting of data of any one of the data types recited in claim 17 is to make the assertion in hindsight of the present claims. Of course, use of hindsight in formulating obviousness-type rejections is improper.

In addition to the immediately foregoing reasons that claim 17 is not obvious in view of the Hatton patent, Hatton does not disclose or suggest the step providing output displaying aggregated input data of the various recited types.

Regarding claim 18, this claim requires the step of facilitating conception by at least one participant of input of the various recited data types, i.e., the data types discussed above. The Hatton system and method do not facilitate the conception of any input, let alone the specific types of input recited. Regarding Hatton's "problem statements," Hatton is silent on the Hatton system facilitating their conception. Regarding Hatton's "solutions to problem statements," again these are outputs of Hatton's system. Hatton is completely silent on the other data types.

Regarding dependent claims 19-23, each of these claims contains a limitation that Hatton does not disclose or suggest and that is not obvious in view of the references of record.

For at least the foregoing reasons, the present obviousness-type rejection of claims 1-27 is improper. Therefore, Applicant respectfully requests that the Examiner withdraw this rejection.

#### **Patentability of New Claims 28-35**

New independent claim 28 essentially requires two steps, step (a) of instructing at least one participant on a number of concepts directed to facilitating conceiving inventions and step (b) of instructing the at least one participant to input at least one data item relating to these concepts. Neither Hatton, nor any other reference of record discloses or suggests these steps.

New independent claim 30 requires, among other things the steps of receiving a mess statement and generating an invention map. Neither Hatton, nor any other reference of record discloses or suggests these steps.

New independent claims 35 and 36 each require, among other things, sets of computer instructions providing various input fields and providing specific labels for these fields. Neither Hatton, nor any other reference of record discloses or suggests these instruction sets. In addition, these claims each require a set of computer instructions for generating an invention map. Neither Hatton, nor any other reference of record discloses or suggests such an instruction set.

For at least the foregoing reasons, Applicant asserts that new claims 28-35 are patentable over the references of record.




**Conclusion**

In view of the foregoing, Applicant respectfully submits that claims 1-35, as amended, are in condition for allowance. Therefore, prompt issuance of a Notice of Allowance is respectfully solicited. If any issues remain, the Examiner is encouraged to call the undersigned attorney at the number listed below.

Respectfully submitted,

IPCAPITAL GROUP, INC.

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Attachments:

Newly-Executed Declaration  
Annotated Drawing Sheets (2)  
Exhibits A and B

BTv.266908.1

Attorney Docket No. ipCG-508

## DECLARATION FOR PATENT APPLICATION

As a below-named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name; I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter claimed in the present application and for which a patent is sought on the invention entitled:

### NETWORK-BASED SYSTEM AND METHOD FOR FACILITATING CONCEPTION OF INVENTIONS IN A DIRECTED MANNER

the specification of which (check one):

\_\_\_\_, is attached hereto;

☒ was filed on 02/12/01, as United States Application Serial No. 09/781,368.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims and the drawings, and including any amendments referred to herein.

#### **Duty of Disclosure and Truthfulness of Information Provided**

I acknowledge the duty to disclose information that is material to the patentability of the above-identified invention of the present application in accordance with Title 37, Code of Federal Regulations, section 1.56.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, Title 18 of the United States Code, section 1001, and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Attorney Docket No. ipCG-508

### Foreign Priority

I hereby claim foreign priority under Title 35, United States Code, section 119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate have a filing date before that of the application for which priority is claimed:

Prior Foreign Application(s): \_\_\_\_\_

Number	Country	Day/Month/Year	Priority Claimed (Yes/No)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

### U.S. Provisional Application Priority

I hereby claim benefit under Title 35, United States Code, section 119(e) of any United States provisional patent applications listed below: 5

Provisional Application Serial No.	Filing Date
<u>60/181,459</u>	<u>02/10/00</u>
<u>60/179,675</u>	<u>02/02/00</u>
<u>60/181,816</u>	<u>02/11/00</u>
<u>60/181,741</u>	<u>02/11/00</u>
<u>60/181,825</u>	<u>02/11/00</u>

### U.S. Non-Provisional Application Priority

I hereby claim the benefit under Title 35, United States Code, section 120, of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, section 112, I acknowledge the duty to disclose information material to the patentability of the above-identified invention as defined in Title 37, Code of Federal Regulations, section 1.56, which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Prior U.S. Applications: 4

Serial No.	Filed	Status
<u>09/766,456</u>	<u>01/19/01</u>	<u>Pending</u>

Attorney Docket No. ipCG-508

Serial No.	Filed	Status
<u>09/781,361</u>	<u>02/12/01</u>	<u>Pending</u>
<u>09/781,362</u>	<u>02/12/01</u>	<u>Pending</u>
<u>09/781,365</u>	<u>02/12/01</u>	<u>Pending</u>

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Post Office Address: \_\_\_\_\_  
Citizenship: \_\_\_\_\_

Additional sheet with Inventor information attached: \_\_\_\_\_ Yes ☒ No

ANNOTATED

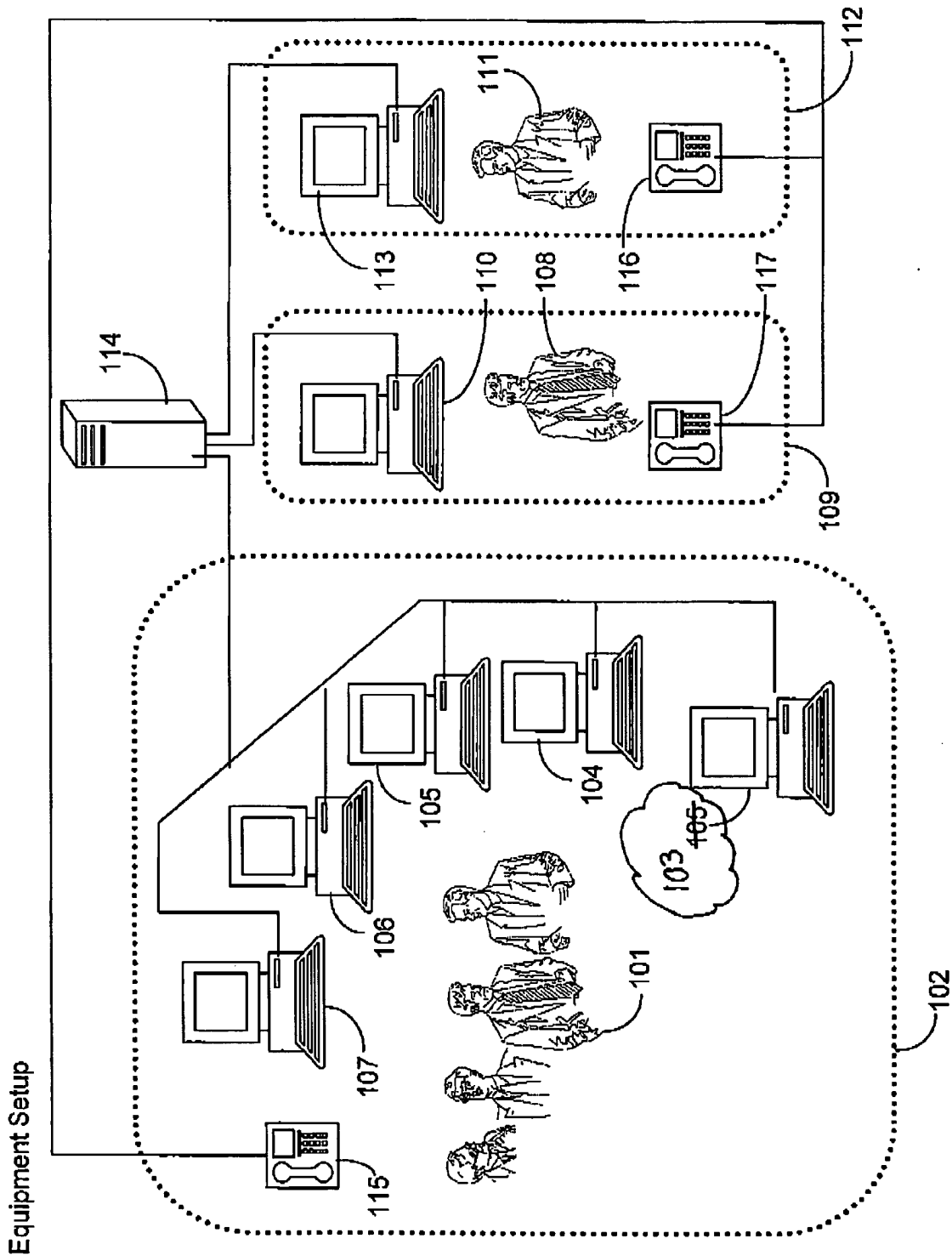


FIG. 1

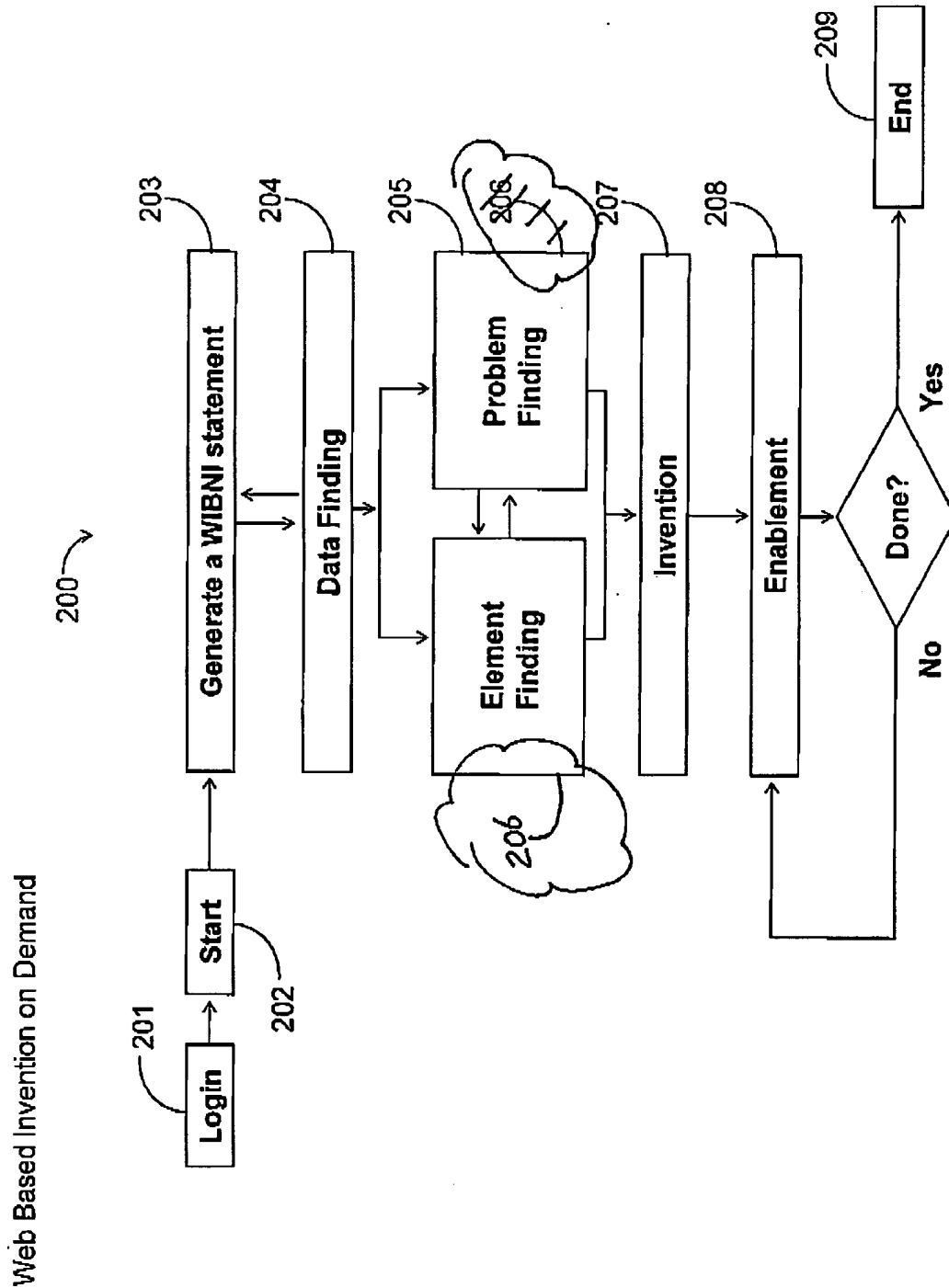
ANNOTATED

FIG. 2

## EXHIBIT A

# CREATIVE PROBLEM SOLVING (v2.3)

Problem Sensitivity  
▼

A situation that we recognize that we want to do something about

Mess or Objective  
▼

FACT  
FINDING

A situation is looked at from all angles...

All data possible collected

Gathering and analyzing data in preparation for defining the problem

PROBLEM  
FINDING

State in many ways what the problem might be... to formulate a working definition of the challenge... Analyzing problematic areas in order to pick out and point up the problem to be attacked.

IDEA  
FINDING

Brainstorm for ideas... Deferral of judgment; search for quantity... Idea production... thinking up, processing, and developing numerous possible leads to solution

SOLUTION  
FINDING

Choose from ideas a few of the ones we especially like and weigh them against some evaluative standards... Evaluating potential solutions against defined criteria.

ACCEPTANCE  
FINDING

Devise a plan of action by anticipating any need to modify our chosen idea(s) to provide the best and most acceptable solution... Adoption... developing a plan of action and implementing the chosen solution.

Plan  
▼

Action  
▼

New Challenges

Source: Treffinger, Isaksen, Fresten, 1982

## EXHIBIT B

# Creative Problem Solving (CPS Version 6.1™) A Contemporary Framework for Managing Change

Donald J. Treffinger, Scott G. Isaksen, & K. Brian Dorval

## *Creative Problem Solving is...*

... a model to help you solve problems and manage change creatively. It gives you a set of easy-to-use tools to help translate your goals and dreams into reality. CPS Version 6.1™ is:

**Proven.** CPS has been used for more than 50 years by organizations throughout the world and is supported by research, with hundreds of published studies on its effectiveness and impact.

**Portable.** CPS links your natural creativity and problem-solving approaches. It is an easy-to-learn process that can be readily applied by individuals and groups of many ages, in many organizations, settings, and cultures.

**Powerful.** CPS can be integrated with many organizational activities, providing new or additional tools for making a real difference. It can stimulate important and lasting changes in your life and work.

**Practical.** CPS can be used for dealing with everyday problems as well as long-term challenges and opportunities.

**Positive.** CPS helps you to unleash your creative talent and to focus your thinking constructively. When applied by groups, CPS promotes teamwork, collaboration, and constructive diversity when dealing with complex opportunities and challenges.



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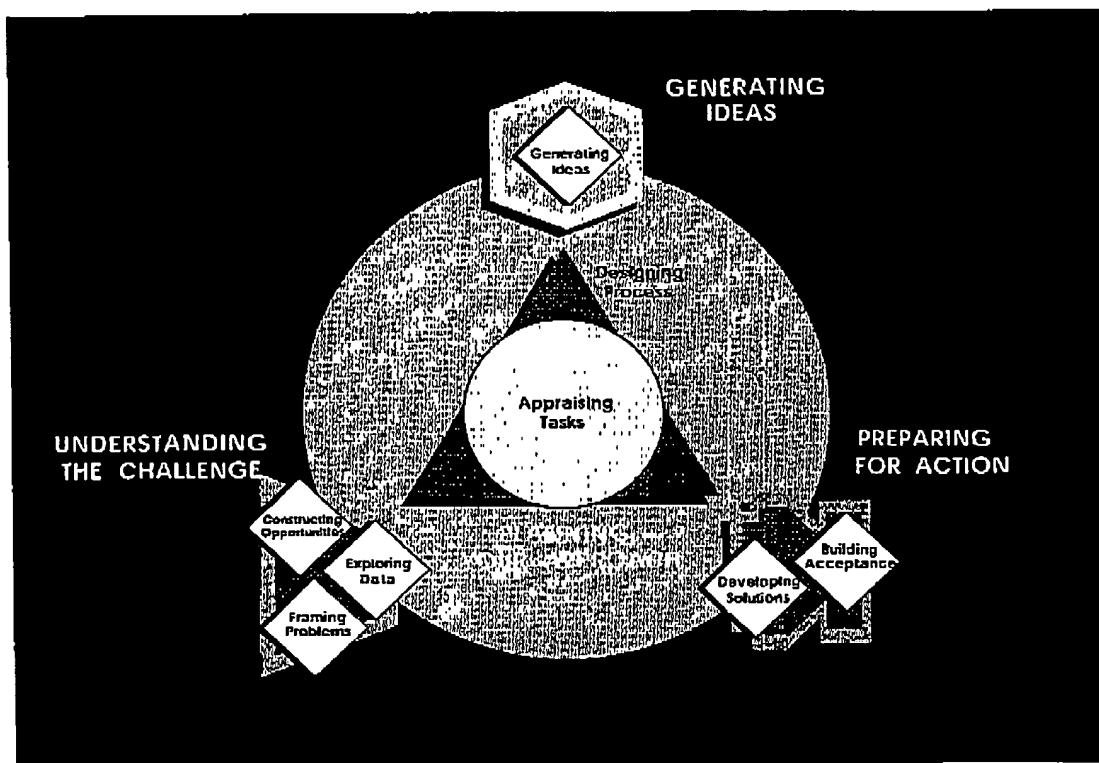
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## Creative Problem Solving (CPS)— Components and Stages

This pamphlet provides a concise summary of and guide to Creative Problem Solving (CPS Version 6.1™)—the latest version of our framework for solving problems and managing change. This summary of CPS Version 6.1™ includes our latest work and draws upon our texts *Creative Problem Solving: An Introduction, Third Edition* (Treffinger, Isaksen, & Dorval, 2000) and *Creative Approaches to Problem Solving, Second Edition* (Isaksen, Dorval, & Treffinger, 2000).

CPS Version 6.1™ guides you in using both your creative and critical thinking skills in harmony, on your own or in a group, to understand challenges and opportunities, generate ideas, and develop effective plans for solving problems and managing change. CPS Version 6.1™ includes the four main components and eight specific stages illustrated in the figure below and described on the following pages.



### The Creative Problem Solving Framework (CPS Version 6.1™)

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## Understanding the Challenge

Understanding the Challenge involves investigating a broad goal, opportunity, or challenge, and clarifying, formulating, or focusing your thinking to set the principal direction for your work. *Use one or more of the three stages in Understanding the Challenge when you need to explore and focus your thinking about your goals, objectives, or directions you hope to pursue.*

**Constructing Opportunities.** Stating broad, brief, and beneficial opportunities and goals. Considering possible opportunities and challenges, and identifying a constructive goal to pursue.

*Benefit for you:* Constructing Opportunities helps you focus your attention and energy on positive directions—goals that will help you move forward with confidence and enthusiasm!

**Exploring Data.** Examining many sources of data from different points of view, and focusing on the most important elements of the task or situation. Considering what you know about the situation and what you need or want to know, to get to the “heart” of the matter.

*Benefit for you:* Exploring Data helps you to locate the key elements in the current realities of your task—factors that help you understand the situation, instead of distracting you from your real goal!

**Framing Problems.** Generating many, varied, and unusual ways to pose the problem, and then focusing on a specific statement that will “open the door” for and invite creative ideas. It helps you to think about, “How might we...” rather than “We can’t because....”

*Benefit for you:* Framing Problems helps you to express your problems or challenges in ways that build motivation, excitement, and enthusiasm for discovering and constructing creative ideas!

## Generating Ideas

Generating Ideas, which has one stage, involves coming up with many new possibilities. Generating Ideas is viewed by many people as “creative,” and is sometimes (in error) equated with “brainstorming.” We view Generating Ideas as one important component and stage among several in CPS, and we use brainstorming as one specific tool (among many) for generating options. *Use this component and stage when you need to generate many, varied, and unusual ideas for a clearly stated problem, and then identify the promising possibilities.*

**Generating Ideas.** An open, exploration or search for ideas, in which you generate many ideas (fluency in thinking), varied ideas and new perspectives (flexibility), and unusual or novel ideas (originality), and then focus your thinking by identifying ideas with interesting or exciting potential to refine, develop, and put to use.

*Benefit for you:* Generating Ideas helps you to “stretch” your thinking, and to break away from the limitations or assumptions that might hold you back. CPS tools give you practical help for thinking that is “inside the box in new ways” as well as “outside the box.”

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## Preparing for Action

Preparing for Action involves exploring ways to make promising options into workable solutions and preparing for successful implementation. It helps you to take promising solutions and develop them so they're as strong as you can possibly make them, and to consider ways to create the best possible chance of success. *Use one or more of the two stages in this component when you need to move promising new possibilities towards successful action or implementation.*

*Developing Solutions.* Applying deliberate strategies and tools to analyze, develop, and refine promising possibilities, and to transform them into promising solutions.

*Benefit for you:* Developing Solutions helps you to use practical tools to turn "good ideas" into powerful new solutions.

*Building Acceptance.* Considering ways to build support and to decrease or overcome resistance to possible solutions, and planning specific ways to carry out and evaluate your results and effectiveness.

*Benefit for you:* Building Acceptance helps you to implement creative ideas successfully!

## Planning Your Approach

Planning Your Approach involves keeping track of your thinking while it is happening, to insure that you're moving in the direction you want to go. It also guides you in "customizing" or personalizing your approach to applying CPS. *Use these stages when you need to decide whether to use CPS or to monitor, manage, and modify your activities as you apply CPS.*

*Appraising Tasks.* Determining whether CPS is a promising choice for dealing with a particular task, and taking stock of the commitments, constraints, and conditions you must consider to apply CPS effectively (the *people* involved, the *results* you desire, the *context* in which you are working, and the *methods* available).

*Benefit for you:* Appraising Tasks helps you to get the best from people, resources, and methods—enabling you to decide wisely about applying the method and increasing your chances of success.

*Designing Process.* Using your knowledge of the task and your needs to plan the CPS components, stages, or tools that will be best-suited to help you reach your goals.

*Benefit for you:* Designing Process helps you choose and use the components, stages, or tools that you really need—increasing the relevance and efficiency of your efforts.

### *For More Information:*

- Isaksen, S. G., Dorval, K. B., & Treffinger, D. J. (1998). *Toolbox for Creative Problem Solving: Basic Tools and Resources*. Williamsville, NY: Creative Problem Solving Group—Buffalo.
- Isaksen, S. G., Dorval, K. B., & Treffinger, D. J. (2000). *Creative approaches to problem solving*. (2nd Ed.). Dubuque, IA: Kendall/Hunt.
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## Versions of Creative Problem Solving

The following tables depict the emergence and development of our work on Creative Problem Solving, from our historical roots in the Osborn-Parnes tradition to our current work. CPS Version 6.1™ draws upon our history, but also builds on theory and research from the cognitive and behavioral sciences as well as our practical experience in businesses, education, and other organizational settings worldwide. In this summary, we review the essential stages of the development of our work using the familiar notation of computer software (since, in many ways, CPS is "software for the mind"). There have been six major versions of our framework, including our roots in the earlier Osborn-Parnes models; each version also included incremental updates and refinements. A change in the version number indicates a major advance, and a change in the decimal following the version number indicates a refinement of that version.

### Making the creative process explicit and deliberate

Version	Publication Date	Description
1.0	1952, 1953, 1957	Alex Osborn's original description provided in <i>How to become more creative</i> and <i>Applied Imagination</i> outlined the seven-step CPS model
1.1	1963, 1967	Revised description provided in Alex Osborn's <i>Applied Imagination</i> outlined the three major stages of CPS

### Preparing CPS for an instructional program

Version	Publication Date	Description
2.0	1966	Parnes' Instructor's <i>Manual for Institutes and Programs</i> outlined the Osborn-Parnes five-stage CPS process
2.1	1967	Parnes' <i>Creative Behavior Workbook</i> illustrating the CPS spiral included the five specific stages of the Osborn-Parnes approach
2.2	1976, 1977	Noller, Parnes & Biondi's <i>Creative Actionbook</i> outlined the horizontally framed series of diamonds and the <i>Guide to Creative Action</i> detailed the instructional program.
2.3	1982	Treffinger, Isaksen & Firestien's <i>Handbook of Creative Learning</i> "rotated" the CPS graphic model to a vertical orientation and provide greater emphasis on the converging phases, introduced new converging tools
2.4	1988	Parnes' <i>Visionizing</i> version presented a cycle with multiple series of five-stages each; linked CPS to imagery.

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## Linking person to process

Version	Publication Date	Description
3.0	1985	Isaksen & Treffinger's <i>Creative Problem Solving: The basic course</i> included a deliberate Mess-Finding stage on the front end of CPS (listing outcomes and obstacles, personal orientation, situational outlook, and selecting messes on the basis of ownership), with specific guidelines for creative converging.

## Breaking up the process

Version	Publication Date	Description
4.0	1987, 1989, 1991, 1992	Isaksen & Treffinger break the six stages into three major components in some articles and chapters (in an attempt to make the process more usable - people could not "run through" all six stages!). This is the first version that differentiates our approach from Osborn-Parnes

## Taking a descriptive approach

Version	Publication Date	Description
5.0	1992	Isaksen & Dorval's articles chapters and course materials break the prescriptive view into a descriptive graphic and approach (providing different pathways through the process)
5.1	1994	Isaksen, Dorval & Treffinger's <i>Creative Approaches to Problem Solving</i> replace a prescriptive CPS model with task appraisal and process planning to guide problem solvers in determining the appropriate approach and use of the CPS framework

## Integrating the model into a systemic framework

Version	Publication Date	Description
6.0	1994, 1998	Treffinger, Isaksen, & Dorval's <i>Creative Problem Solving: An Introduction</i> depicts the inclusion of Task Appraisal and Process Planning. CPS version 6.0 has a dynamic, open, flexible system at its core with a clear process planning mechanism, clarifying elements of the system (see also: Isaksen, Dorval, & Treffinger, <i>Toolbox for Creative Problem Solving</i> ).
6.1	2000	Isaksen, Dorval, & Treffinger, <i>Creative Approaches to Problem Solving (2<sup>nd</sup> Ed.)</i> , Treffinger, Isaksen, & Dorval, <i>Introduction to Creative Problem Solving (3<sup>rd</sup> Ed.)</i> . We used task appraisal and process planning to form the "Planning Your Approach" component as a management or metacognitive component with two specific stages (Appraising Tasks and Designing Process). The CPS Version 6.1 <sup>TM</sup> system now includes four components and eight stages.

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